

## Abstract

Said invention relates to an arrangement of at least one heat-insulation layer (3) for a carrier body (2) for preventing heat transfer between said carrier body and a surrounding area (7) therearound comprising at least one type of luminous substance which is excitable with the aid of an excitation light having a determined excitation wavelength for emitting a luminescent light having a defined emission wavelength and at least one another heat-insulation layer (5) which is essentially free of said luminous substance. The inventive arrangement is characterised in that said another heat-insulation layer is embodied in such a way that it is opaque with respect to the excitation light used for initiating the luminescent light emission and/or to a luminous substance light. Said luminous substance contains at least one type of mixed oxide selected from a perovskite group of total formula  $AA'O_3$ , and/or of pyrochlore of total formula  $A_2B_2O_7$ , wherein A and A' is the trivalent metal, respectively and B is a tetravalent metal. The inventive heat-insulation layer is preferably used for a gas turbine, the state thereof being easily controlled.